

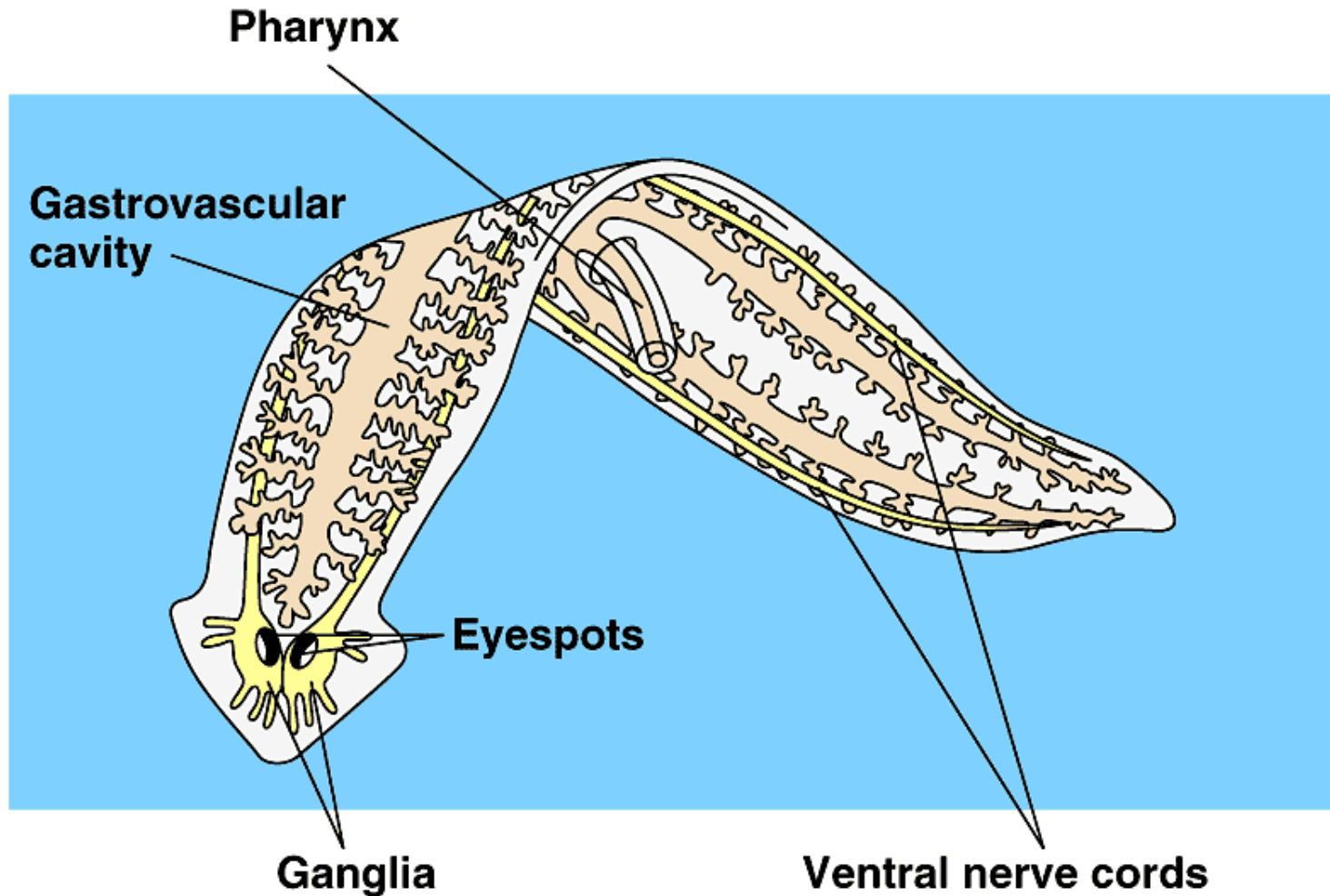
Pre AP Biology

Circulatory and Respiratory Systems

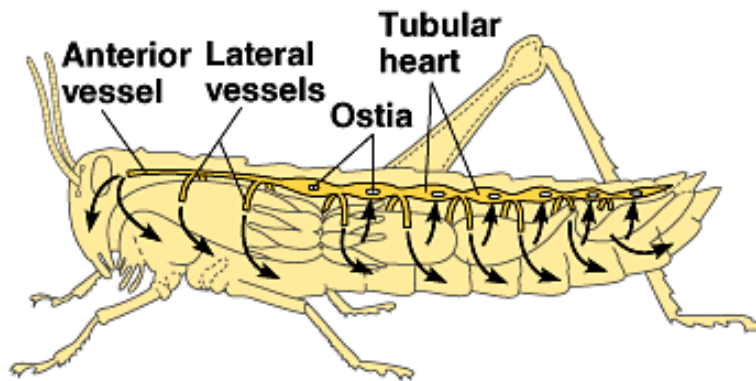
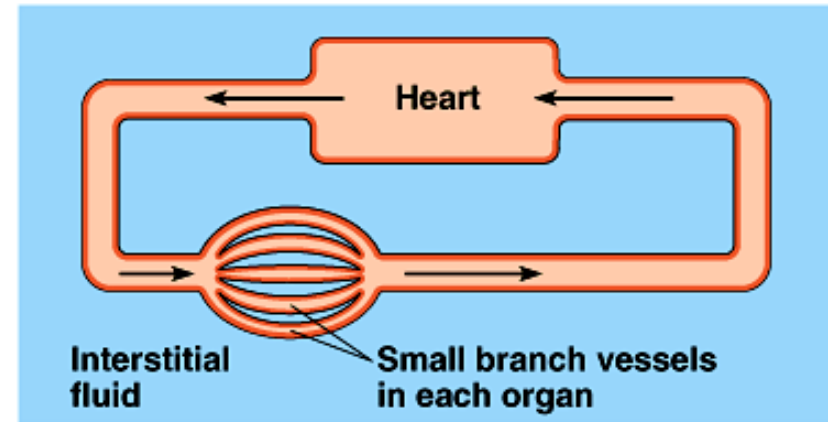
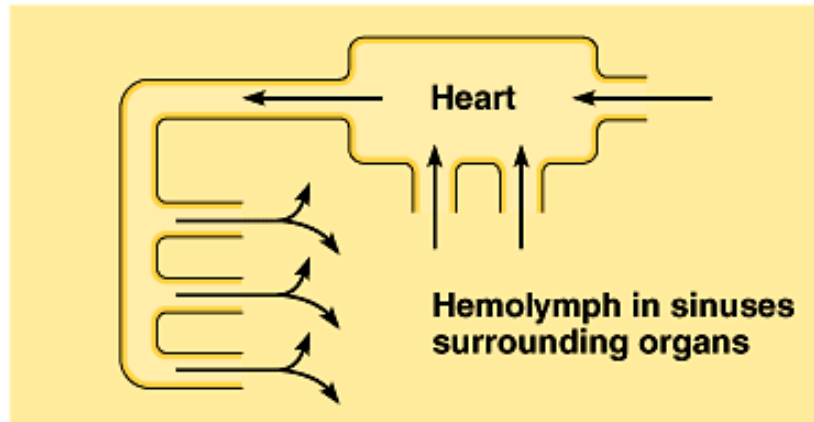
(8.11)

Part 1

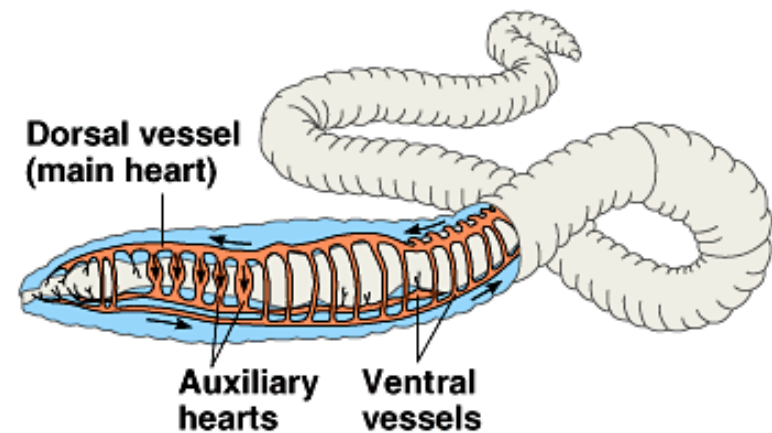
Gastrovascular Cavity



Open Circulatory (left) & Closed Circulatory (right)



(a) Open circulatory system

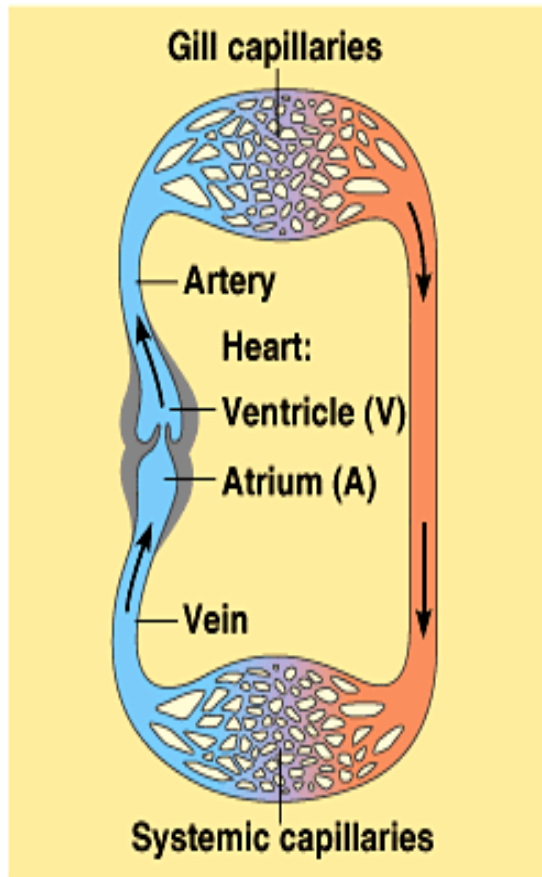


(b) Closed circulatory system

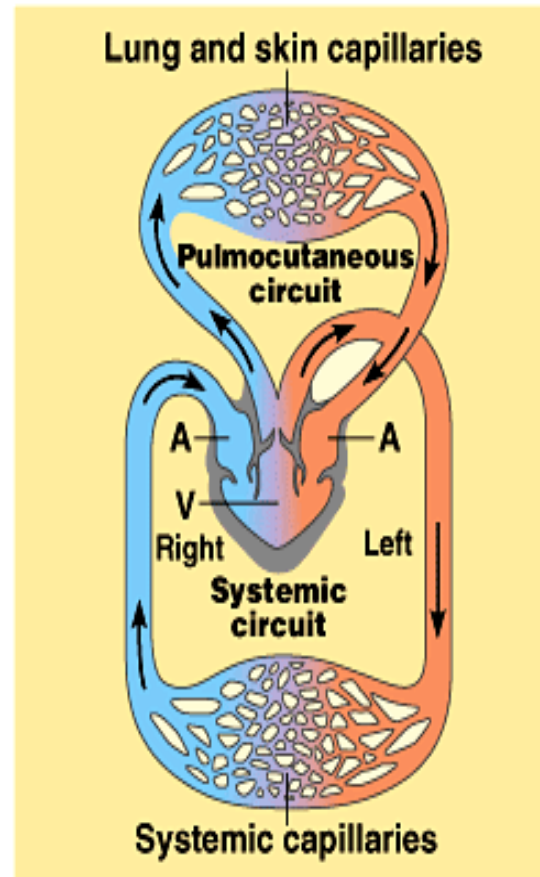
Heart Structure

Atrium – receives blood

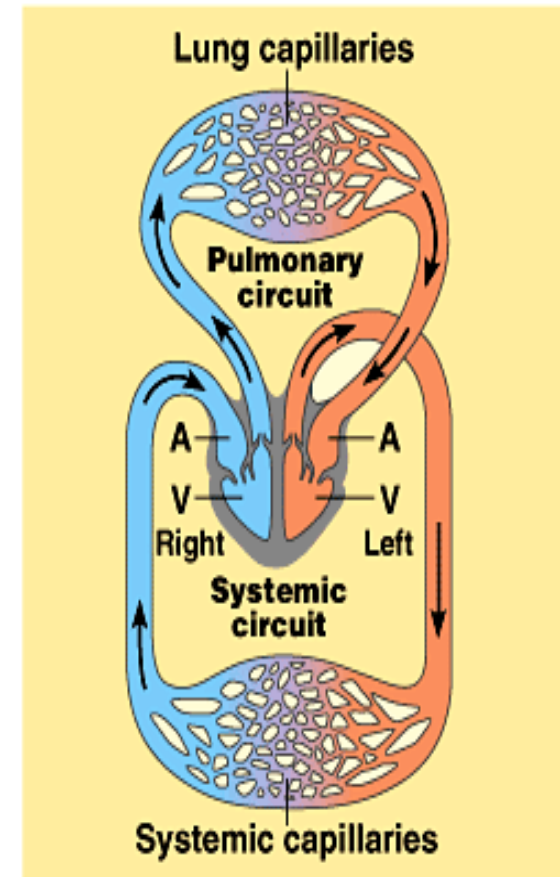
Ventricles – pump blood out



(a) Fish

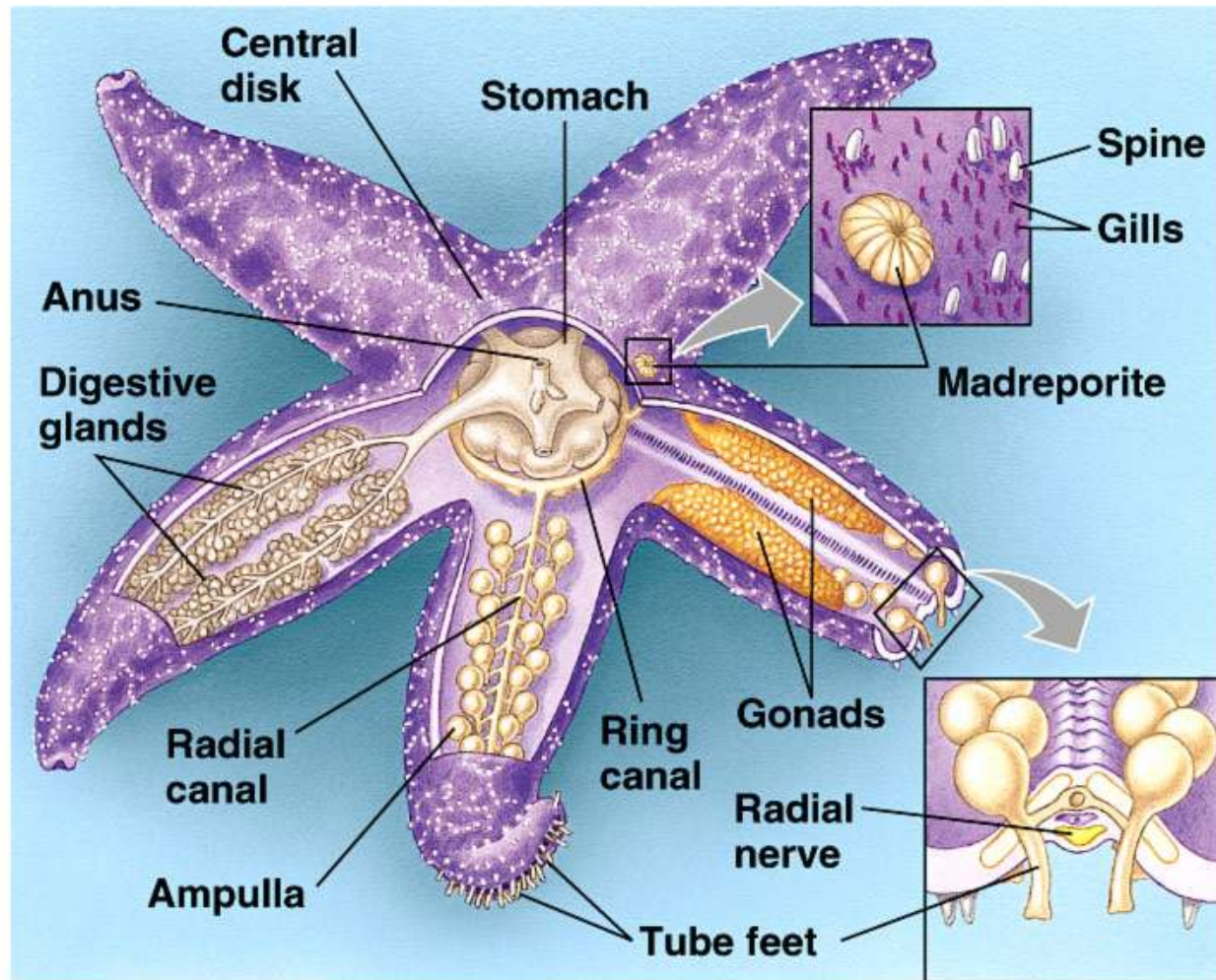


(b) Amphibian

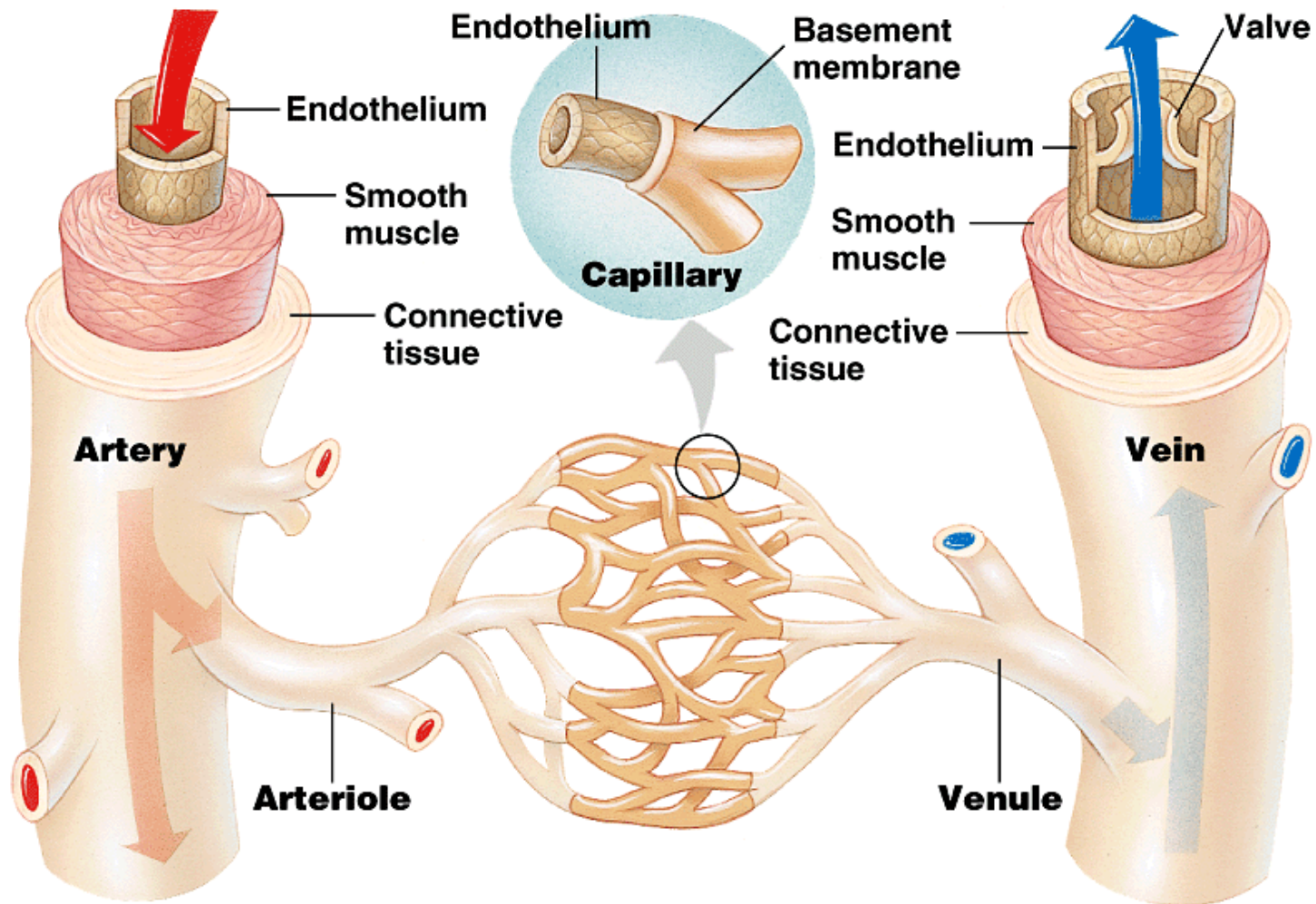


(c) Mammal

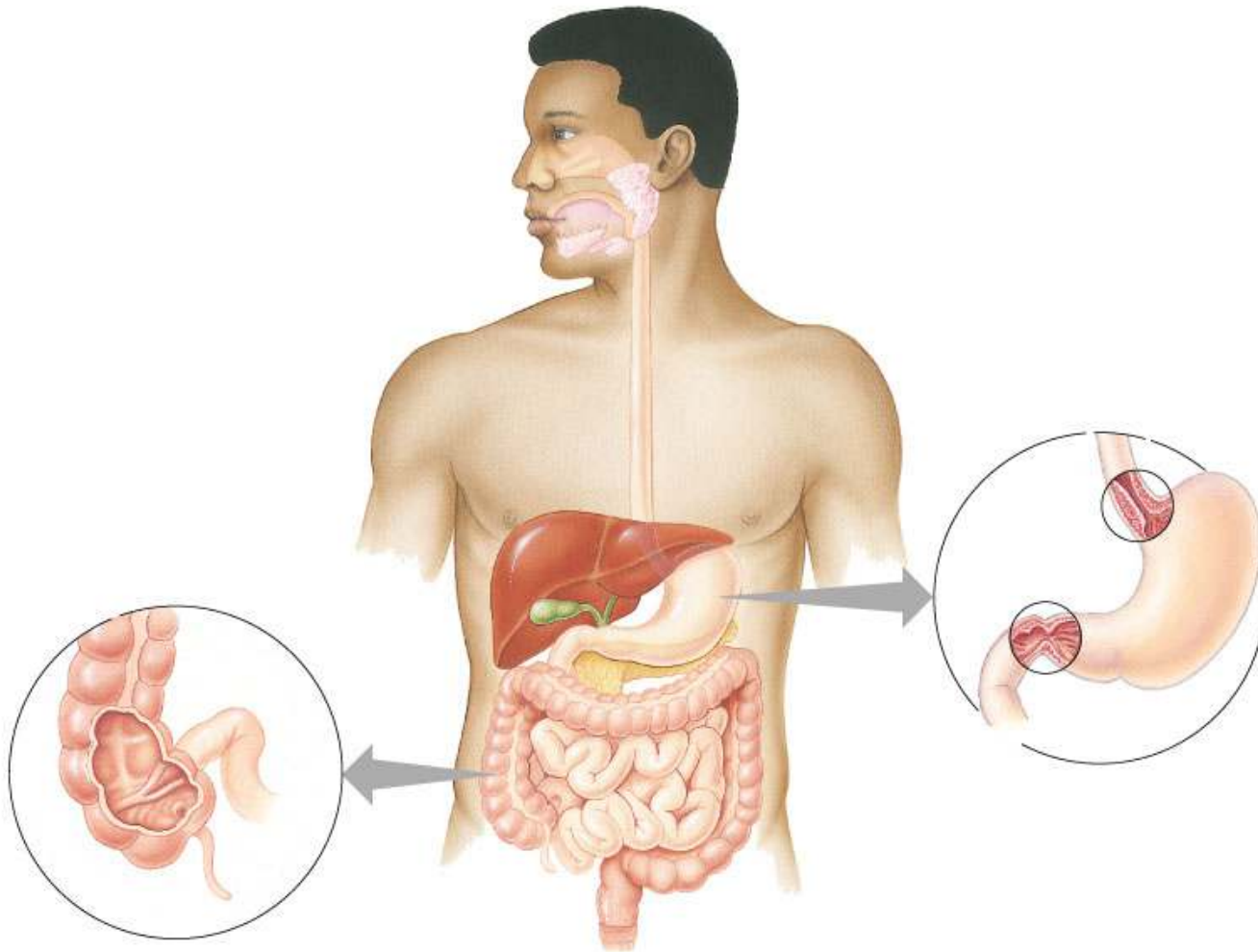
Water Vascular System



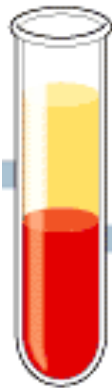
Blood Vessel Types


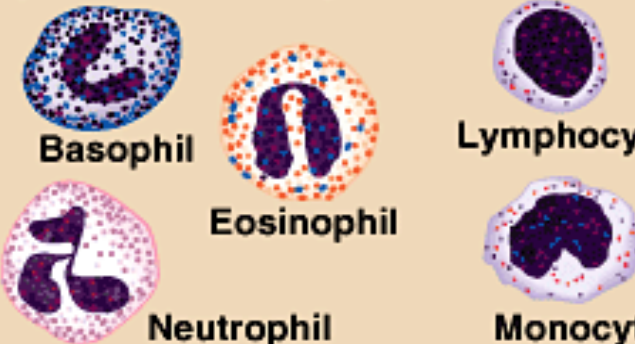



Where is the blood?



Blood Cell Types



Cellular elements 45%		
Cell type	Number (per mm³ of blood)	Functions
Erythrocytes (red blood cells) 	5–6 million	Transport oxygen and help transport carbon dioxide
Leukocytes (white blood cells) 	5000–10,000	Defense and immunity
Platelets 	250,000–400,000	Blood clotting

Pre AP Biology

Circulatory and Respiratory Systems

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Part 2

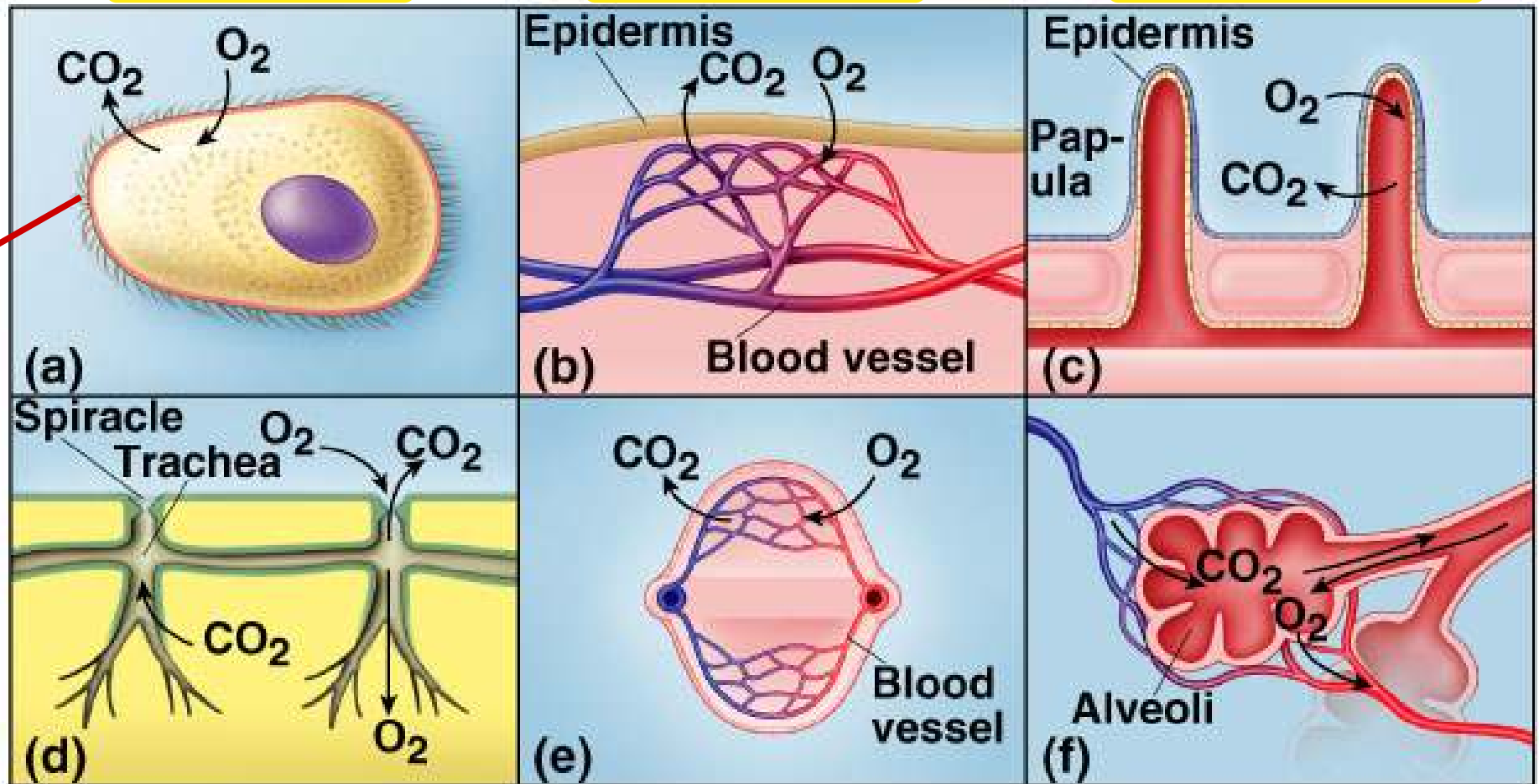
Gas Exchange in Many Forms...

one-celled

amphibians

echinoderms

cilia



insects

fish

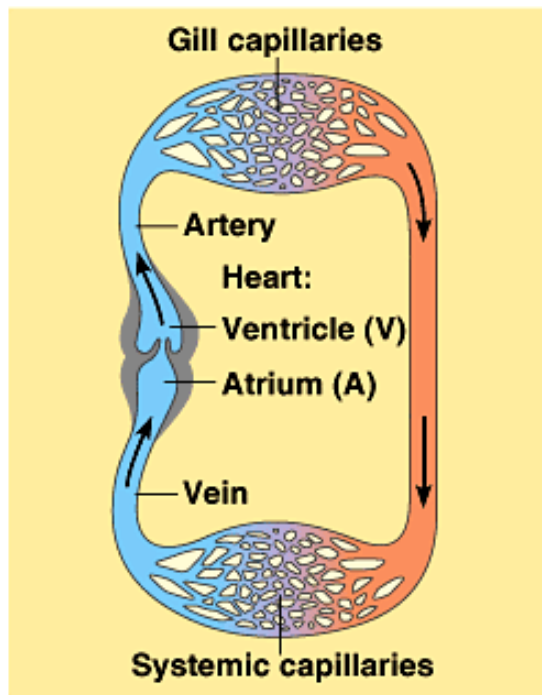
mammals

size

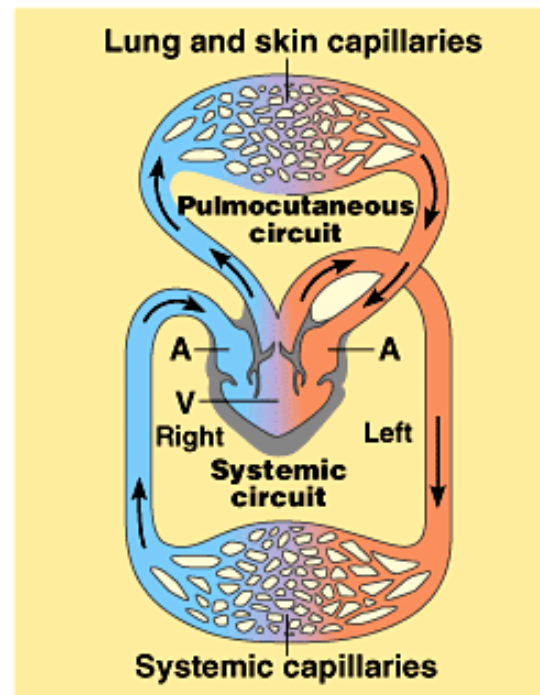
• water vs. land

• endotherm vs. ectotherm

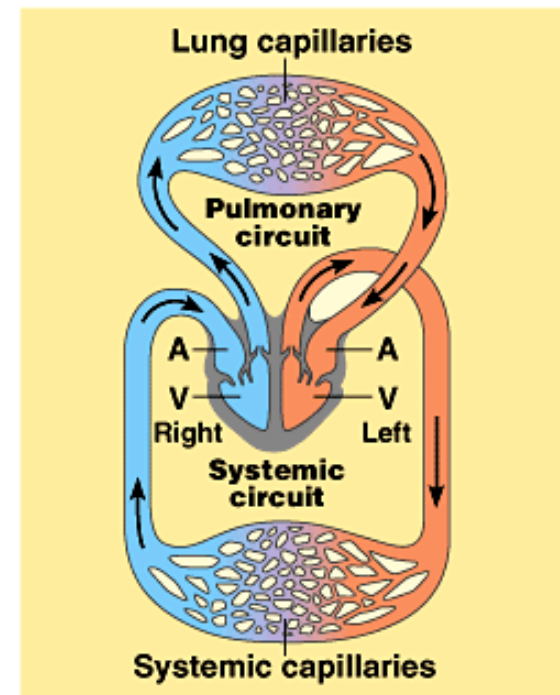
Working Together



(a) Fish

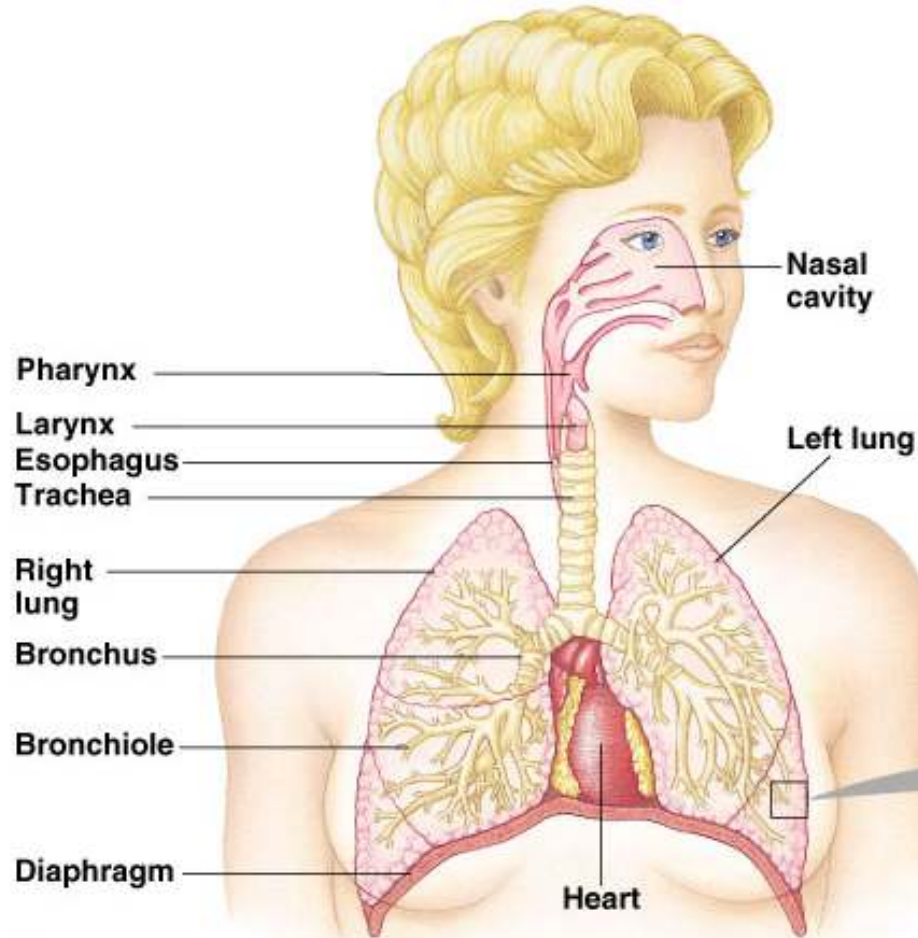


(b) Amphibian

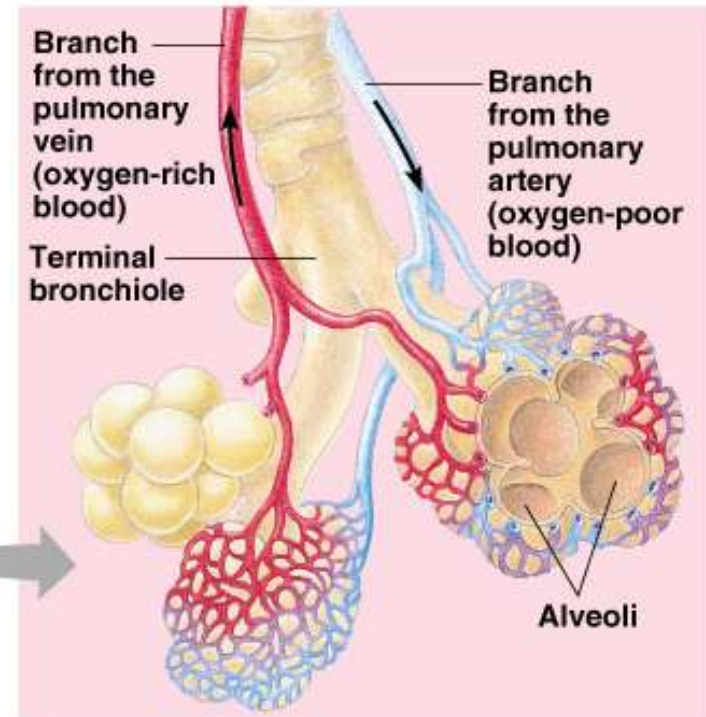


(c) Mammal

Human Respiratory System



(a)



(b)